SUCCESS

Deliverable 5.7 V1.0

Data Management Plan for Trials, V1

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Abstract:
This Deliverable sets out Version 1 of the data management plan for the Success trials. It describes the data management procedures to be used to manage personal data at individual trial sites and at the pan-European level, should any personal data be collected.

Keyword list:
Success Project, data management, personal data

Disclaimer:
All information provided reflects the status of the SUCCESS project at the time of writing and may be subject to change.

Executive Summary

The objective of this deliverable is to identify the data to be generated in the three SUCCESS trials, in Ireland, Italy and Romania. To analyse this data and to determine whether it identifies or makes identifiable a natural person and hence would be classified as personal data, and in which case whether data protection law would be applicable.

The conclusion of this analysis is as follows:

1. For the Irish Trial no data generated can be used to identify a natural person, and hence data protection law is not applicable to the handling of trial data.

2. For the Italian trial, since attacks will be simulated, no personal data will be handled and therefore data protection law is not applicable to the handling of trial data.

3. For the Romanian trial no data generated can be used to identify a natural person, and hence data protection law is not applicable to the handling of trial data.

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1. Introduction

The objective of this deliverable is to identify the data to be generated in the three SUCCESS trials, in Ireland, Italy and Romania and to analyse this data and determine whether it identifies or makes identifiable a natural person. If so, the data would be classified as personal data. We analyse whether data protection law would be applicable.

While the NORM devices can generate a wide range of different data for input to the DSO-SMC, as specified in Annex A of Deliverable 3.7, only a limited subset of this data will be used in the trials, the relevant data is noted below in the description for each trial site.

1.1 How to read this document

This document provides information on the data generated by the SUCCESS trial sites and an analysis of the data protection implications.

- Section 2 covers the Irish Trial
- Section 3 covers the Italian Trial
- Section 4 covers the Romanian Trial.
- Sections 5 and 6 provide references and conclusions.

General descriptions of the SUCCESS solution and components deployed at the trial sites can be found in D2.4.

2. Data Management for the Irish Trial

2.1 Introduction to the Irish Trial

The objective of the Irish trial is to deploy a NORM device incorporated into an electric vehicle charging unit, in order to manage the security of the unit, to detect and to counter cyberattacks.

The function and architecture of the trial is described in Section 2.1 of Deliverable 5.1

2.2 Data generation in the Trial

In the Irish Trial data is generated by the Wally smart meter [1]. The main data elements generated are the following:

- Current measurements
- Voltage measurements
- Frequency measurements

These elements are collected from the meter every second. The following information can be derived from basic measurements:

- Energy usage
- Power quality

The equipment used in the trail will be owned by the ESB. Data generated during the trial will be under the control of the ESB.

The trial configuration will not monitor the identity of a vehicle connected to the charger or the identify of the user, as this is not required for the project.

Other data such as the availability of electric vehicle to Grid power is not considered in this project but is being assessed in other projects such as Reserve[1].

2.3 Analysis of data

As the trial site is not open to the public and access to the EV charging station is restricted to ESB staff, no form of access control or cost based charging is used, hence no data on which vehicle or which users is connected to the charge point is collected. Hence the only information provided to SUCCESS components are the direct measurement elements mentioned above and the two derived elements.

These seven elements do not contain any personal data, as there is no identification of the car or the user of the car that is connected to the charge point.

Thus, there is no issue with the use of the above seven information elements, in their storage, manipulation, and transmission, either within the Irish jurisdiction or abroad.

2.4 Irish Trial conclusion

As no personal data is being generated by the Wally or NORM devices in the Irish trial, no special precautions are required to handle data in the trial. However, it is possible that in a commercial deployment some personal data might be generated. Such data should be handled by the system in a correct manner using the Privacy-Preserving Information Security Architecture, being developed in Workpackage 3 (see Deliverable 3.2 for a description of the architecture).

3. Data Management for the Italian Trial

3.1 Introduction to the Italian Trial

The objective of the Italian trial is to deploy five NORM devices incorporated into different block of energy (BoE) units, namely electric vehicle charging station, PV arrays, batteries and block of buildings, in order to manage the security of ancillary services and demand response systems, detecting and countering cyberattacks. ASM TERNI is the owner of the BoE units used during the trial as well as of the data currently generated by each unit.

The function and architecture of the trial is described in Section 2.3 of Deliverable 5.1.Data generation in Italian Trial.

In the Italian Trial, data is generated by the Wally smart meter [1]. The main data elements generated are the following:

- Current measurements
- Voltage measurements
- Frequency measurements
- Power factor
- Harmonics measurements
- Flicker measurements

These elements are collected from the meter every second. The following information is derived from basic measurements:

- Energy usage
- Active Power
- Reactive Power
- Power quality

Since the trial configuration will be put offline, data will be generated only under request. However, historical data concerning each BoE units could be provided by ASM TERNI to SUCCESS partners under signing a data management agreement.

It is worth pointing out that Demand Response and Ancillary services strategies are currently under study by Nobel Grid - *New Cost Efficient Business Models for Flexible Smart Grids* (GA n.

646184) [2] and ELSA *Energy Local Storage Advanced system* (GA n. 646125) [3] H2020 projects in terms of technical performance and socio-economic sustainability.

3.2 Analysis of data

As the trial site is not open to the public and under control of ASM TERNI, no form of access control or charging is used. Moreover, since attacks will be simulated, hence no personal data will be managed by the SUCCESS project for this trial.

However, in case of analysis of historical data provided by ASM TERNI to the SUCCESS consortium for the purposes of SUCCESS, ASM TERNI shall require a consent for data management (storage, manipulation, and transmission).

3.3 Italian Trial conclusion

As no personal data is being generated by the NORM device in the Italian trial, no special precaution are required to handle data generated during the trial.

However, it is possible that in a commercial deployment some personal data may be generated. Such data should be handled by the system in a correct manner using the Privacy-Preserving Information Security Architecture, being developed in the document D3.2

The transfer of historical data to other Partners may require a data management agreement.

4. Data Management for the Romanian Trial

4.1 Introduction to the Romania Trial

The objective of the Romanian trial is to deploy up to seven NORM devices incorporated into different Energy Exchange Points (EExP) units, named PVPP, WPP, SS-secondary substation (MV/LV) and PS-primary substation, detecting and countering cyberattacks. Electrica is the owner of the Energy Exchange Points units used during the trial as well as of the data currently generated by each unit.

The function and architecture of the trial is described Section 2.2 in Deliverable 5.1.

4.2 Data generation in Romania Trial

In the Romanian Trial data is generated by the A1800 or SL7000 local smart meter [4,5] and by the low cost PMU developed in the project. The main data elements generated by the cumulated equipment are the following:

- Time of measurements
- Voltage measurements
- Frequency measurements
- Phase of voltage measurements

These elements are collected from the meter each five to ten seconds for the smart meters and each second for the low cost PMU.

4.3 Analysis of data

As the trial site is not open to the public and under control of Electrica, no form of access control is used. Moreover, since attacks will be simulated, no personal data will be managed by the SUCCESS project.

However, in case of analysis of historical data provided by Electrica to the SUCCESS consortium for the purposes of SUCCESS, Electrica shall require a consent for data management (storage, manipulation, and transmission).

4.4 Romanian trial conclusion

As no personal data is being generated by the NORM device in the Romanian trial, no special precaution are required to handle data generated during the trial. However, it is possible that in a commercial deployment some personal data may be generated. Such data should be handled by the system in a correct manner using the Privacy-Preserving Information Security Architecture, being developed in WP 3, as described in Deliverable 3.2.

5. Conclusion

No personal data issues have been identified in the current SUCCESS trial configurations, and hence no additional measures are required for the secure handling, storage, transmission or processing of the generated data.

While it is not planned to change the architecture of the trial over the course of the project, if changes are made the data management implications will be re-assessed to ensure that any generation of data identifying an individual, is flagged and appropriate protection measures are put in place.

In some cases, the transfer of historical data to another SUCCESS partner may require a data management agreement be put in place.

6. References

[1] Wally A3 Energy and Power Quality Meter. User Manual, TeamWare, 1st Edition November 2011.
[2] H2020 Nobel Grid project, www.nobelgrid.eu (accessed on 24.04.2017)
[3] H2020 ELSA project, http://elsa-h2020.eu/ (accessed on 24.04.2017)
[4] Brochure Elster A1800 ALPHA meter, 2010, https://www.elstersolutions.com/assets/products/ products_elster_files/DS42-1003F.pdf (accessed 25.04.2017)
[5] Brochure Itron SL7000 meter, https://www.itron.com/eu/-/media/itron/integration/brochure/ acesl7000el00191fr0615.pdf (accessed 24.04.2017)

7. List of Abbreviations

D-SMC	DSO Security Monitoring Centre
DSO	Distribution System Operator
DSO-SMC	Distribution System Operator – Security Monitoring Centre
EExP	Energy Exchange Point
ESMC	Pan-European Security Monitoring Centre
E-SMIS	Security Monitoring and Information System
LV	Low Voltage
MV	Medium voltage
NORM	New-generation Open Real-time Smart Meter
PMU	Phasor Measurement Unit
PS	Primary substation,
PVPP	Photovoltaic (PV) Power Plant
SS	Secondary Substation
WP	Work Package
WPP,	Wind Power Plant